

**2017 U of MN Invitational
Small Animal CDE Written Exam**

Directions: Choose the answer which best answers the question/statement correctly. Fill in the answer on the front of the scantron under exam.

1. Dogs and cats can get tapeworm for ingesting which of the following?
 - a. raw fish
 - b. flies
 - c. ticks
 - d. fleas

2. The long nosed breeds of dogs have a __ type of skull.
 - a. Dolichocephalic
 - b. Brachycephalic
 - c. Mesocephalic
 - d. Longadorcephalic

3. Arthritis is
 - a. breaking of the joints of an animal
 - b. inflammation of the joints of an animal
 - c. inflammation of the muscles of an animal
 - d. not a problem in dogs or cats

4. The term caudal refers to
 - a. to the head or in a direction towards the head of an animal
 - b. to the center or in a direction the middle of an animal
 - c. to the rear or in a direction toward the rear of an animal
 - d. to the top or in a direction toward the top of an animal

5. A cardiac muscle cell is
 - a. spindle shaped
 - b. rectangular shaped
 - c. elongated
 - d. square shaped

6. Muscles attached to the ___ of the sternum often account for over half of the bird's body weight.
 - a. Alula
 - b. Carpometacarpus
 - c. Cloaca
 - d. Keel

7. The neck muscles of a dog are called the _____.
 - a. Pectorals
 - b. Gluteals
 - c. Latissimus dorsi
 - d. Brachiocephalicus

8. The _____ gland produces the tears that keep a dog's cornea moist.
 - a. Ciliary
 - b. Lacrimal
 - c. Tapetum
 - d. Utricle

9. ___ scales are round and smooth.
- placoid
 - scutes
 - cycloid
 - ctenoid
10. Bottom feeders have a ___ mouth.
- Superior
 - Inferior
 - Terminal
 - Sub-terminal
11. Diagnostic tests performed to find the cause of a pet's problems may include
- blood and urine analysis
 - x-rays
 - biopsies
 - all of the above
12. ___ is a serious eye infection in birds not only because of the damage to the bird but because it is zoonotic.
- Chlamydia psittaci
 - Lipomas
 - Aspergillosis
 - Escherichia
13. Which of the following is an example of a disease caused by a fungus?
- FVR
 - Toxoplasmosis
 - Hepatitis
 - Ringworm
14. Dog hookworm is confirmed by checking
- a blood sample
 - a urine sample
 - a feces sample
 - the dog's joints
15. A soft-bodied arthropod that may be seen walking on your bird, cat or dog is a
- flea
 - louse
 - mite
 - tick
16. Sometimes called Rubarth's disease, this disease affects the liver.
- Infectious Canine Hepatitis
 - Parvovirus
 - Leptospirosis
 - Canine distemper
17. The _____ is a crustacean that buries its head into the fish's tissue.
- Fish louse
 - Anchor worm
 - Blood worm
 - Hydatid

18. The most serious blood parasite in birds is ____.
- Proglottids
 - Knemidocoptes
 - Leucocytozoon
 - Dermanyssus
19. The phenotype of an animal is
- All the genes possessed by the animal
 - The union of gametes carrying different alleles
 - The physical appearance of an animal
 - The term used to describe a heterozygous condition
20. Estrus is a stage in the reproductive stage of the female cat or dog also known as
- heat
 - pregnancy
 - epistaxis
 - meiosis
21. A phenomenon known as _____ or masking occurs when some genes overwhelm the characteristics produced by other genes.
- Epistasis
 - Estancia
 - Enology
 - Egestion
22. In birds, the urinary and sexual openings are in the _____.
- Cloaca
 - Ceca
 - Collop
 - Copra
23. Dogs have a gestation period of _____ days.
- 45
 - 55
 - 63
 - 73
24. Grooming consumes ____ percent of a cat's waking hours.
- 20 to 40
 - 30 to 50
 - 40 to 60
 - 50 to 70
25. With the exception of ____, parrots will not bathe themselves in a standing bowl of water.
- Lorrie
 - Conure
 - Macaw
 - Cockatoo
26. Which of the following must be supplemented to a vegetarian diet fed to cats?
- vitamin A
 - thiamin
 - starch
 - vitamin D

27. Which vitamin deficiency is most commonly associated with the long term feeding of seeds to birds (choose one)?
- Iron
 - Vitamin A
 - Iodine
 - Choline
28. Which of the following nutrients is the most concentrated source of energy?
- water
 - carbohydrates
 - lipids
 - protein
29. Which of the following is not a purpose for using fiber in companion animal diets?
- increases rate of passage of food
 - cheap feed ingredient
 - adds palatability to the diet
 - used in weight reduction diets
30. The term "lite" on a petfood label refers to
- fiber content
 - moisture content
 - fat content
 - caloric content
31. Cats do not have the ability to synthesize this essential fatty acid and it must be provided in the diet
- glycocholic acid
 - stearic acid
 - arachidonic acid
 - oleic acid
32. Siamese cats can be susceptible to toxicity of which of the following minerals?
- iron
 - cobalt
 - zinc
 - manganese
33. Which of the following is not a primary role of water?
- lubricates body joints and tissue
 - facilitates metabolic reactions in the body
 - source of energy
 - regulates body temperature
34. Because rabbits practice coprophagy, their requirement for which of the following vitamins is minimal?
- Vitamin A
 - B vitamins
 - Vitamin E
 - Vitamin D
35. If supplemental meat or table scraps are fed to adult dogs at maintenance, they should account for no more than
- 10% of the total diet
 - 25% of the total diet
 - 50% of the total diet
 - 75% of the total diet

36. The average litter size for cats is
- 1-3 kittens
 - 4-6 kittens
 - 7-8 kittens
 - 9-10 kittens
37. In pregnant bitches, fetal growth during the first 5 to 6 weeks of pregnancy is
- less than 30%
 - between 30-40%
 - between 40-50%
 - greater than 50%
38. Rabbits become sexually mature at
- 2 to 5 months of age
 - 5 to 8 months of age
 - 9 to 12 months of age
 - greater than one year of age
39. The term used for the birth process in rabbits is
- whelping
 - kindling
 - parturition
 - queening
40. The sperm of male fish is referred to as
- milt
 - gilt
 - lilt
 - zilt
41. Which of the following statements is true for rabbits?
- rabbits are sensitive to temperatures about 70° F
 - rabbits seem particularly sensitive to muscular dystrophy induced by vitamin K deficiency
 - rabbits have been known to suffer from heart worm disease
 - rabbits vomit if they ingest fur balls
42. Vaccinations to help safeguard a puppy's health are available for the following diseases except for
- vulvulus
 - rabies
 - parvovirus
 - hepatitis
43. Of the following breeds of cats, which is a longhaired breed?
- Manx
 - Sphynx
 - Abyssinian
 - Somali
44. Dogs should be bathed
- only when they become extremely dirty
 - every week
 - every month
 - once a year

45. Which of the following is in the working group of dogs?
- Italian Greyhound
 - Rottweiler
 - Bulldog
 - Basenji
46. Free-choice feeding in kennel settings may be beneficial because it
- increases nutrient intake by maximizing coprophagy
 - minimizes the noise associated with meal time
 - helps to detect anorexia
 - helps to detect overconsumption
47. An increase in nitrates and nitrites in fish tanks is due to
- dirty filters
 - accumulation of uneaten food
 - overpopulation of fish
 - all of the above
48. Cages for rabbits that weigh from 6 to 11 pounds should be
- 24 inches wide, 24 inches long and 14 inches high
 - 24 inches wide, 36 inches long and 18 inches high
 - 24 inches wide, 48 inches long and 18 inches high
 - 30 inches wide, 48 inches long and 24 inches high
49. Which of the following materials is least desirable for feed container construction for large parrot-type birds?
- plastic
 - glass
 - ceramic
 - stainless steel
50. The organ within the ear that enables the cat to hear sounds in the ultrasonic range is
- nictitating membrane
 - olfactory mucosa
 - cochlea
 - Jacobson's organ

KEY – 2017 U of MN Small Animal Exam

- | | |
|-------|-------|
| 1. d | 26. a |
| 2. a | 27. b |
| 3. b | 28. c |
| 4. c | 29. c |
| 5. b | 30. d |
| 6. d | 31. c |
| 7. d | 32. d |
| 8. b | 33. c |
| 9. c | 34. b |
| 10. b | 35. a |
| 11. d | 36. b |
| 12. a | 37. a |
| 13. b | 38. b |
| 14. c | 39. b |
| 15. c | 40. a |
| 16. a | 41. c |
| 17. b | 42. a |
| 18. c | 43. d |
| 19. c | 44. a |
| 20. a | 45. b |
| 21. a | 46. b |
| 22. a | 47. d |
| 23. c | 48. b |
| 24. b | 49. a |
| 25. a | 50. c |

2017 U of MN Winter Invite

Small Animal ID KEY

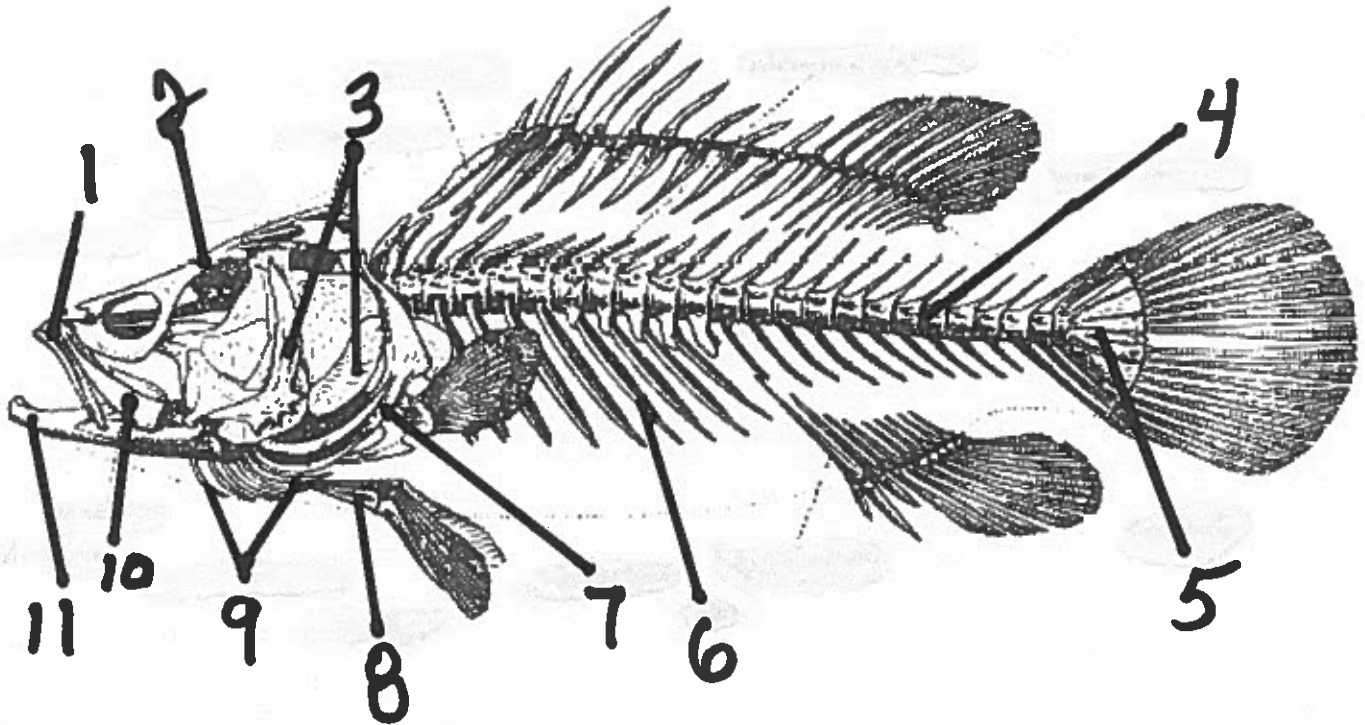
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2	210	40	403
3	309	41	123
4	216	42	605
5	402	43	312
6	105	44	506
7	218	45	124
8	504	46	604
9	127	47	318
10	412	48	214
11	306	49	509
12	109	50	111
13	602		
14	221		
15	101		
16	204		
17	118		
18	304		
19	406		
20	136		
21	206		
22	609		
23	222		
24	126		
25	303		
26	510		
27	212		
28	411		
29	316		
30	130		
31	608		
32	321		
33	133		
34	201		
35	324		
36	120		
37	515		
38	139		

2017 University of Minnesota Winter Invitational Small Animal CDE

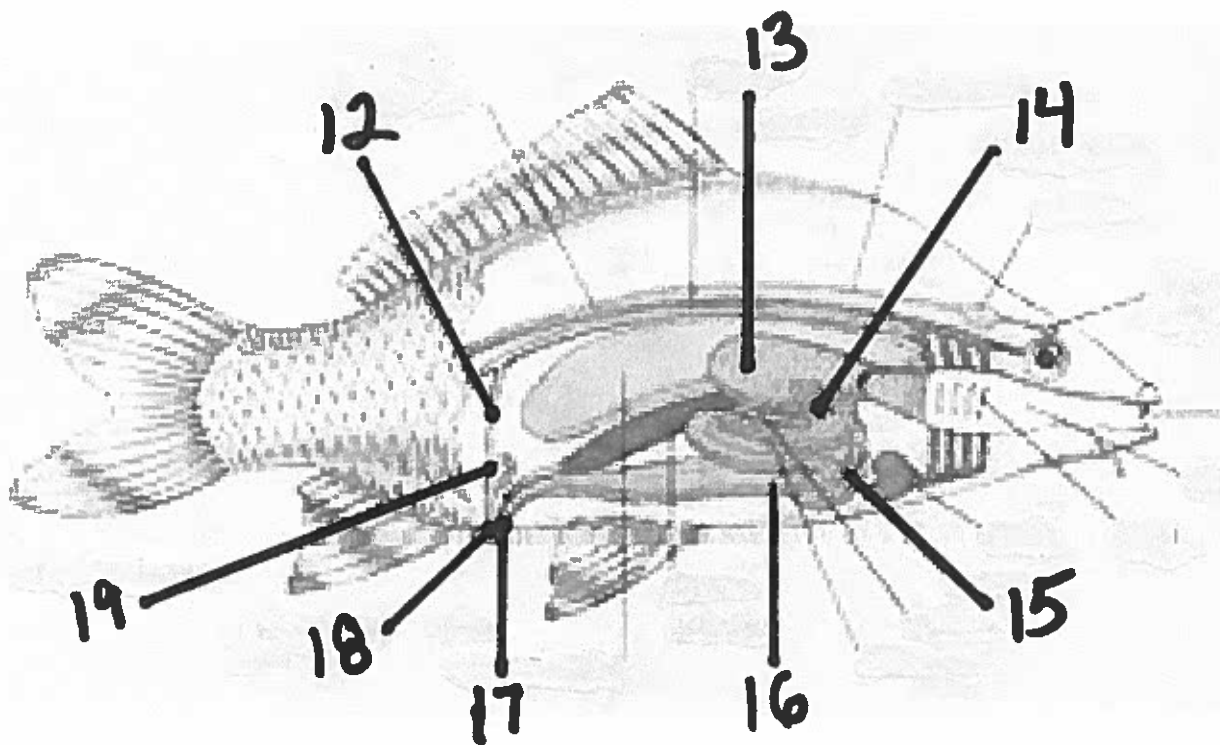
Anatomy Practicum- All answers are worth two points each

Use the bottom half of the back of the scantron to record your 3 number code answers.

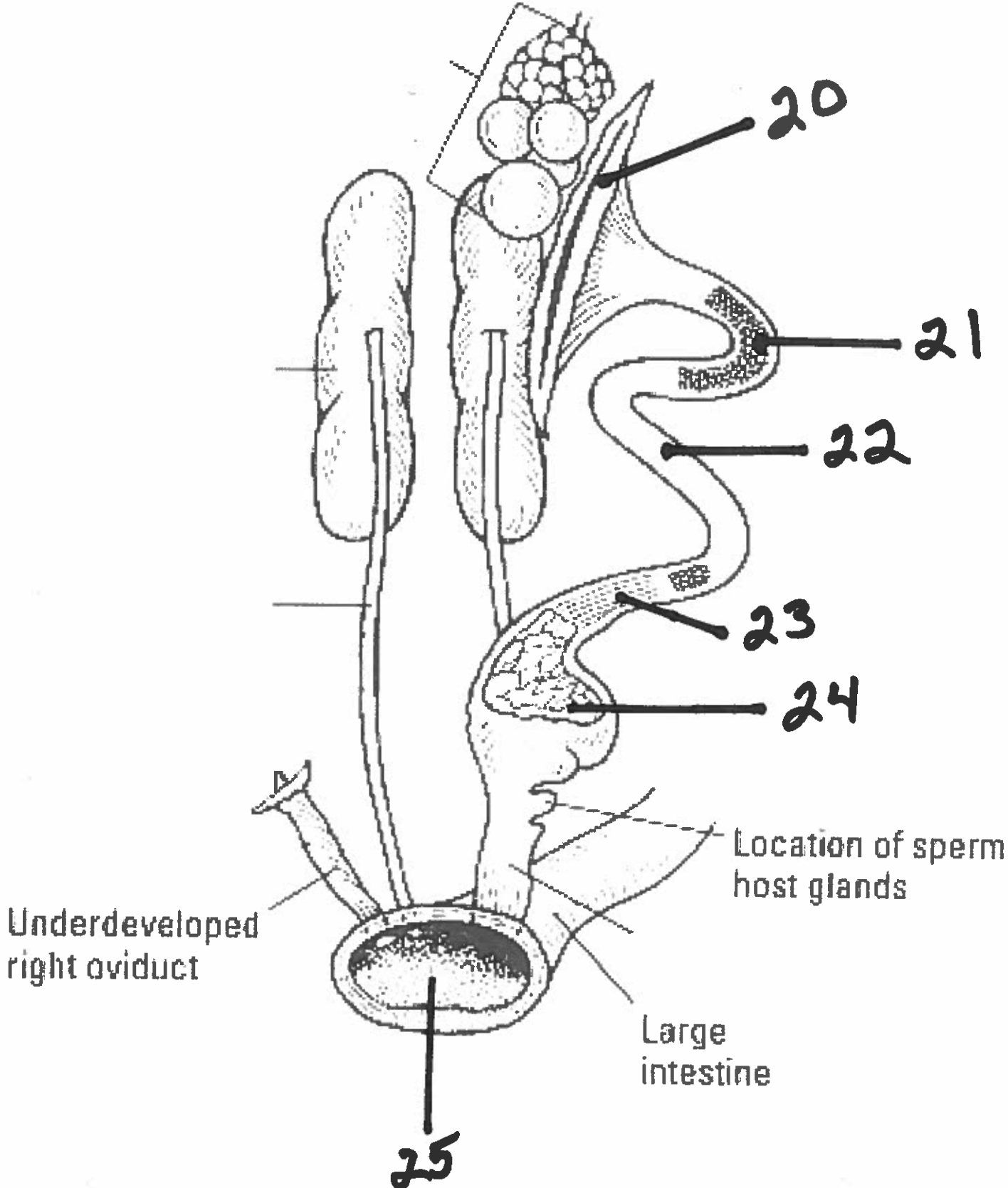
Fish Skelton



Fish Digestive/ Excretory



Chicken Female Reproductive Tract



2017 U of MN Winter Invite Anatomy Word Bank

Skeletal, Digestive & Reproductive Systems of Fish and Avian

Bubble in the 3 number code on the bottom half of the back side of your scantron.

111	Anus	130	Olfactory bulb
112	Abdominal vertebra	131	Opercular bones
113	Branchiostegal rays	132	Oviduct
114	Caudal vertebra	133	Pancreas
115	Ceca	134	Pectoral arch
116	Cloaca	135	Pelvic bones
117	Cranium	136	Premaxillary
118	Crop	137	Proventriculus
119	Gizzard	138	Pyloric cecum
120	Hypurals	139	Rib
121	Infundibulum	140	Shell gland (Uterus)
122	Isthmus	141	Stomach
123	Intestine	142	Ureter
124	Kidney	143	Urinary bladder
125	Liver	144	Urinogenital opening
126	Lower Jaw	145	Vagina
127	Magnum	146	Vas deferens
128	Maxillary	147	Zygote
129	Mouth		

2017 U of MN Winter Invite Anatomy Key

Skeletal, Digestive & Reproductive Systems of Fish and Avian

1.	136	14.	138
2.	117	15.	125
3.	131	16.	123
4.	114	17.	111
5.	120	18.	144
6.	139	19.	143
7.	134	20.	121
8.	135	21.	127
9.	113	22.	132
10.	128	23.	122
11.	126	24.	140
12.	142	25.	116
13.	141		

2017 University of Minnesota Winter Invitational Small Animal CDE

Health Issues and Nutrition Problem Solving Practicums

(3 points each unless labeled)

Use the Exam 2/Team Section of your Scantron to answer these questions

Animal Health Issues

1. You fed your cat, Walter, a can of cat food which may have been spoiled. You believe it may have caused salmonellosis (food poisoning). What is the most common clinical sign observed with salmonellosis?
 - A. Fever
 - B. Headache
 - C. Muscle spasms
 - D. Diarrhea

2. What parasite infestation would cause your rabbit to have "wry neck"?
 - A. Fur mites
 - B. Ear mites
 - C. Ringworm
 - D. Pinworm

3. Your cat, Penelope, is showing signs of illness. You take her to a veterinarian he determines that the disease is caused by a retrovirus. Which disease is the most likely cause?
 - A. Feline panleukopenia
 - B. Feline rhinotracheitis
 - C. Feline infectious peritonitis
 - D. Feline leukemia

4. Your friend's dog, Mortimer, is sick and you believe it is because of the poor sanitation where he lives. Which disease is zoonotic and transmitted via direct contact with contaminated water and soil?
 - A. Leptospirosis
 - B. Q fever
 - C. Canine parvo
 - D. Plague

5. The cost for small breed puppy food is cheaper than the puppy food for larger breeds. The pet store worker tells you your dog needs the large breed puppy food. What is one reason why large breed puppies should eat large breed puppy food?
 - A. the kibble is larger which decreases the choking hazard
 - B. it is more energy dense to support rapid growth.
 - C. it has a higher calcium level to reduce the risk of bone deformities.
 - D. large breed puppies require different set of nutrients than small breed puppies.

6. Since her birth, Tully has a disease that was passed to her from her mother. She has trouble breathing and has been showing signs of abdominal pains. Tully most likely has...
 - A. Canine Herpesvirus
 - B. Kennel Cough
 - C. Salmonellosis
 - D. Tuberculosis

7. Phoebe has discharge from her nasal passages and she seems to sneeze often. Phoebe most likely is suffering from...
- A. Feline Phneumontis
 - B. Feline Leukemia
 - C. Feline Panlaukopenia
 - D. Feline Rhinotracheitis
8. Snickles is an indoor/outdoor cat who frequently brings home critters and because of this her pregnant owner must avoid cleaning the litter box. What might this cat have that could hurt its owner?
- A. Tapeworms
 - B. Lice
 - C. Toxoplasmosis
 - D. Roundworms
9. Spanky has rice looking things attached to his fur by his butt, what parasite does Spanky have?
- A. Tapeworm
 - B. Roundworm
 - C. Whipworm
 - D. Hookworm
10. You have recently noticed that your fish are becoming dull of color and not as active as normal. They also tend to have more mucus on their bodies than in the past. What do your fish have?
- A. white spot
 - B. slime disease
 - C. white fungus growth
 - D. velvet disease
11. Fluffy your rabbit has matted fur on her paws; she has been sneezing and has a white colored nasal discharge. You also notice she has an abscess on her neck, what does Fluffy have?
- A. Enteritis
 - B. Wry Neck
 - C. Weepy Eye
 - D. Snuffles
12. Your dog recently had a litter of puppies and you notice that her mammary tissue is swollen, red and hot to the touch. You also notice that her milk seems a little lumpy, what is going on with your dog?
- A. Clogged milk duct
 - B. Mastitis
 - C. Letdown disease
 - D. a puppy bit her teat

Nutrition - 2017 Winter Invitational

Feeding Guidelines (standard measuring cups/day)

Weight (lbs.)	6- 12 weeks	3-4 months	5-7 months	8-12 months	Adult Dogs
3 – 5	1 – 1 1/3	3/4 – 1 1/4	2/3 – 3/4	1/2 – 2/3	1/3 – 1/2
5 – 10	1 1/3 – 2 1/4	1 1/4 – 2	3/4 – 1 1/3	2/3 – 1	1/2 – 3/4
10 – 20	2 1/4 – 3 1/2	2 – 3	1 1/3 – 2 1/4	1 – 1 3/4	3/4 – 1 1/2
20 – 30	3 1/2 – 4 2/3	3 – 4	2 1/4 – 3	1 3/4 – 2 1/3	1 1/2 – 2
30 – 40	4 2/3 – 5 3/4	4 – 5	3 – 3 2/3	2 1/3 – 3	2 – 2 1/3
40 – 60	---	5 – 6 2/3	3 2/3 – 4 3/4	3 – 3 3/4	2 1/3 – 3

Calorie Content: 370 kcal/cup
1 Cup of Dog Food Weighs 8 oz.

Lizzy has a 35 pound five month old boxer and is having trouble keeping weight on her. The vet recommended that she try to feed her dog 1572 kcal per day.

- How many cups of food should she be feeding? Round to the nearest $\frac{1}{4}$ of a cup.
 - $3 \frac{1}{4}$
 - $3 \frac{3}{4}$
 - $4 \frac{1}{4}$
 - $4 \frac{3}{4}$
- How does this compare to the recommended amount? (2 points)
 - more
 - less
 - the same
- If the dog food is \$37.50 for 45 lbs., how much is the food per pound?
 - \$0.81 / lb.
 - \$0.83 / lb.
 - \$0.85 / lb.
 - \$0.87 / lb.
- How much per cup?
 - \$0.42 / per cup
 - \$0.44 / per cup
 - \$0.46 / per cup
 - \$0.48 / per cup
- If a person were to feed 3 cups per day to their dog, how much would he feed his dog for one month (30 days)?
 - 30 lbs.
 - 45 lbs.
 - 67 lbs.
 - 90 lbs.

2017 University of Minnesota Winter Invitational Small Animal CDE Health Issues and Pet Food Practicums Key

Health Issues

1. D
2. B
3. D
4. A
5. C
6. A
7. D
8. C
9. A
10. B
11. D
12. B

Nutrition

13. C
14. A
15. B
16. A
17. B